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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,843	06/14/2001	Yong Rui	MCS-070-00	2837

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EXAMINER

ENG, GEORGE

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 06/18/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

10

Office Action Summary

Application No.

09/681,843

Applicant(s)

RUI ET AL.

Examiner

George Eng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Response to Amendment

1. This Office action is in response to amendment filed 4/7/2003 (paper no. 6).

Information Disclosure Statement

2. The information disclosure statement filed 1/30/2003 (paper no. 5) has been considered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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4. Claims 1-20 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Viallet et al. (WO 00/13417 hereinafter Viallet) in view of McCall et al. (US PAT. 6,002,430 hereinafter McCall).

Regarding claim 1, Viallet discloses an automated system for capturing and viewing an event having event participants comprising a camera system (10, figure 1) for providing image of the event and that simultaneously monitoring the event participants and films the event, a controlling system (20, figure 1), read as an automated online broadcasting system, for controlling and using the camera system to keep track of each of the monitored event participants simultaneously and broadcasting the events, and an interface (30, figure 1), read as a viewer platform, for communicating with the automated camera control system for allowing a viewer to view the broadcasted event (abstract). Viallet differs from the claimed invention in not specifically teaching the camera system comprising a seamless omni-directional camera system that provides a seamless omni-directional image. However, McCall teaches a camera system for forming a seamless spherical image, i.e., a seamless omni-directional image, from captured image or images by cameras in order to provide a maximum amount of viewing coverage without the bulk of additional cameras (col. 3 line 32 through col. 6 line 42 and col. 7 line 38 through col. 9 line 39). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Viallet in using the seamless omni-directional camera system, as per teaching of McCall, because it improves the automated event presentation system by providing the maximum amount of viewing coverage without the bulk of additional cameras.

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Regarding claims 2-4, McCall teaches the camera including a wide-angle imaging device, wherein the wide-angle imaging device providing an approximately 180-degree field-of-view so that the camera system including to combine a plurality of cameras to provide an approximately 360-degree field-of-view (figure 6A, col. 7 lines 38-44 and col. 8 lines 32-42). In addition, McCall also teaches to use a camera having a wide-angle view approximately 360 degrees in order to eliminate the bulk of an additional camera (figure 6B and col. 10 lines 41-46).

Regarding claim 5 Viallet discloses a switching module for allowing switching between of the image of the event (figures 3-4).

Regarding claim 6, McCall teaches the omni-directional camera system for providing a high-resolution image (col. 8 lines 54-63) so that it recognizes the omni-directional camera system having a resolution of approximately 1000 by 1000 pixels.

Regarding claim 7, Viallet teaches the camera control system further comprising means for finding and indexing the event participants (figure 3).

Regarding claim 8, Viallet discloses a method for filming and recording an event having event participants and presenting the event to a viewer, comprising the steps of using a camera system (10, figure 1) for filming and recording the event to provide an image that contains the event participants, determining a location of the event participant in the image, providing a user interface, i.e., a mouse (320, figure 3) or remote control (32B, figure 4), for allowing a choice of which of the event participants in the image to view, the choice is being made by at least one of the viewer, as well as a virtual director, and switching instantaneously between views of the event participants in the image in response to the choice (abstract). Viallet differs from the claimed invention in not specifically teaching the camera system comprising a seamless omni-

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directional camera system that provides a seamless omni-directional image. However, McCall teaches a camera system for forming a seamless spherical image, i.e., a seamless omni-directional image, from captured image or images by cameras in order to provide a maximum amount of viewing coverage without the bulk of additional cameras (col. 3 line 32 through col. 6 line 42 and col. 7 line 38 through col. 9 line 39). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Viallet in using the seamless omni-directional camera system, as per teaching of McCall, because it improves the automated event presentation system by providing the maximum amount of viewing coverage without the bulk of additional cameras.

Regarding claim 9, Viallet teaches to use a computer having computer-executable instructions for performing an operation (figure 3).

Regarding claims 10-13, Viallet teaches to record sound and image in particular for videoconference (abstract) so that it recognizes to store annotations associated with the event and synchronize these annotation with the event for allowing the viewer to select which of the annotation to store, wherein the annotation is being selected while the event is occurring and the annotation includes a whiteboard, a digital chart regarding the event or a digital question and answer session.

Regarding claims 14-16, Viallet teaches the location of the event participants in the image being determined by using a speaker detection technique to determine which of the event participant is speaking, and switching form one camera view to another camera view, wherein the speaker detection technique is a microphone array sound source localization technique that use a microphone array (12) and sound source localization algorithms (figure 2).

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Regarding claim 17, McCall discloses the omni-directional camera system being one of a single panoramic camera and an array camera having an approximately 360-degree field-of-view (figures 6A-6B).

Regarding claim 18, Viallet discloses a method for displaying at least a portion of an image capturing an event occurring within an event environment comprising filming and recording the event using a camera system (10, figure 1) to provide the image that contains each of the event participants (figure 3), transmitting the image from a broadcasting platform (20, figure 3) to a viewer platform (31, figure 3), using the viewer platform to allow a viewer to select which portion of the omni-directional image the viewer would like to view, and switching instantaneously between views of the omni-directional image by presenting a desired portion of the omni-directional image as selected by the viewer (abstract). Note while Viallet teaches the viewer platform is a computer (31, figure 3). Thus, it recognizes to use a computer network for conveying the image between the broadcasting platform and the viewer platform. Viallet differs from the claimed invention in not specifically teaching the camera system comprising a seamless omni-directional camera system that provides a seamless omni-directional image. However, McCall teaches a camera system for forming a seamless spherical image, i.e., a seamless omni-directional image, from captured image or images by cameras in order to provide a maximum amount of viewing coverage without the bulk of additional cameras (col. 3 line 32 through col. 6 line 42 and col. 7 line 38 through col. 9 line 39). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Viallet in using the seamless omni-directional camera system, as per teaching of McCall, because it improves the

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automated event presentation system by providing the maximum amount of viewing coverage without the bulk of additional cameras.

Regarding claim 19, McCall teaches the viewer selecting to view to view multiple portions of the omni-directional image (col. 11 lines 8-25).

Regarding claim 20, Viallet teaches to contain all event participants within the event environment (figure 3).

Regarding claim 25, McCall teaches to require no physical movement to capture the event participants (col. 3 lines 55-58).

Regarding claims 26-27, Viallet discloses a user interface on the viewer platform allowing an arbitrary number of viewers to view an arbitrary number of viewpoints of the broadcasted event, wherein the omni-directional image provides an infinite number of viewpoints, with each viewpoints corresponding to a portion of the omni-directional image, so that instantaneous switching is supported for an infinite number of viewers that select arbitrary different viewpoints (figure 3).

Regarding claim 28, Viallet teaches to transmit an overall image to the viewer platform, select which portion of image to view such that the selection is being made by manually by the viewer and to transmit a selected portion of the image to the viewer platform (abstract and figures 3-4). Viallet differs from the claimed invention in not specifically teaching to transmit a low-resolution version of the omni-directional image to the viewer platform, wherein the omni-directional image produced by the omni-directional camera system is a high-resolution omni-directional image and to transmit a high-resolution version of the selected portion of the omni-direction image to the viewer platform. However, McCall teaches such (col. 13 lines 26-53 and

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col. 16 line 30 through col. 17 line 13). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Viallet in transmitting the low-resolution version of the omni-directional image to the viewer platform and transmitting the high-resolution version of the selected portion of the omni-direction image to the viewer platform, as per teaching of McCall, in order to provide capabilities associated with traditional mechanical pan, tilt, rotation and zoom devices.

5. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kannes (US PAT. 5,382,972) in view of Ono (US PAT. 6,133,941).

Regarding claim 21, Kannes discloses a automated event system for capturing an event comprising a camera system (21-24, figure 1) to provide an omni-directional image that contains each of the event participants (col. 5 lines 8-12), transmitting the omni-directional image of the event so that the omni-directional image containing multiple camera views, a computer (68, figure 2) for broadcasting the omni-directional image over a network, and a viewer platform, i.e., a remote module, to allow a viewer (5) to receive the omni-directional image, and a control module within the computer (68, figure 2) for determining which of multiple camera views within the omni-directional image to display on the viewer platform by applying a set of expert production rules, i.e., selecting a camera based on event participant is currently speaking (col. 4 line 35 through col. 7 line 34 and col. 8 lines 13-21). Kannes differs from the claimed invention in not specifically teaching to transmit the image from the computer to the remote module using a computer network. However, it is notoriously well known in the art of transmitting image using a computer network in order to improve the operability of a camera control system, for example

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see Ono (col. 4 lines 13-39). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Kannes in transmitting the image from the computer to the remote module using a computer network, as per teaching of Ono, because it improves the operability.

Regarding claims 22-23, Kannes discloses a switching module for allowing switching between of the omni-directional image of the event, wherein the switching module provides instantaneous switching between the multiple camera views (col. 5 lines 35-43 and col. 10 lines 24-48).

6. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kannes (US PAT. 5,382,972) in view of Ono (US PAT. 6,133,941) as applied in claim 21 above, and further in view of Bruno et al. (US PAT. 5,710,591) hereinafter Bruno).

Regarding claim 24, Kannes teaches to provide a control means for selecting images (col. 8 lines 13-21). The combination of Kannes and Ono differs from the claimed invention in not specifically teaching to provide negative switching that allows switching to a camera view of a person speaking before begins to speak. However, Bruno teaches such (col. 4 line 62 through col. 5 line 7). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of Kannes and Ono in switching to a camera view of a person speaking before begins to speak, as per teaching of Bruno, because it makes user friendly for subsequent retrieval and processing.

Response to Arguments

7. Applicant's arguments with respect to claims 1-20 and 25-28 have been considered but are moot in view of the new ground(s) of rejection.

8. Applicant's arguments filed 4/7/2003 (paper no. 6) have been fully considered but they are not persuasive.

In response to applicant's argument that Kannes does not teaches a virtual director module within the automated online broadcasting system that determines which of multiple camera views within the omni-directional image to display on the viewer platform, wherein the virtual director platform determines by applying a set of expert production rules, Kannes clearly teaches a control module within a computer (68, figure 2) for determining which of the multiple camera views within the omni-directional image to display in accordance with voice signal, i.e., selecting a camera based on which event participant is currently speaking (col. 5 line 56 through col. 6 line 54 and col.8 line 13-21). Note while the claimed language fails to specifically define what is a set of expert production rules. Thus, the broad claimed language can be read by Kannes.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir.

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1992). In this case, Kannes and Ono is combinable because they are in the same field of endeavor, i.e., controlling image pickup condition of camera. The motivation of combining Ono with Kannes is to improve the operability of each remote module.

In response to applicant's argument that the references fail to show a switching module that is capable of providing negative switching allowing to switch to a camera view of a person speaking before that person begins to speak, it appears that Bruno clearly teaches to switch a current speaker to a new speaker before the new speaker begins talking (col. 4 line 62 through col. 5 line 7). Note while the claimed limitations merely state to allow switching to a camera view of a person speaking before the person begins to speak. Thus, Bruno is enough to reject the unduly broad claimed language. In addition, the argument further defines that the negative switching is performed on a recorded video by determining a delay that exist between the time a new speaker starts talking and the camera switches to the speaker, wherein the delay is subtracted out of the recorded video in order to achieve camera switching in a negative time. However, such limitations are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Geng (US PAT. 6,304,285) discloses a method and apparatus for omni-directional imaging (abstract). Sato et la. (EP 0821522 A2) discloses a camera control apparatus providing

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an end user with environment to easily remote control a video camera via a computer network such as Internet (abstract).

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any response to this final action should be mailed to:

Box AF

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

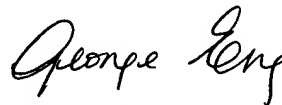
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Eng whose telephone number is (703) 308-9555. The examiner can normally be reached on Tuesday to Friday from 7 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Curtis Kuntz, can be reached on (703) 305-4708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



George Eng

Examiner

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